ACCESSION NR: AP4043001 S/0051/64/017/002/0168/0175

AUTHORS: Kagan, Yu. M.; Lyagushchenko, R. I.

TITLE: Excitation of inert gases in the positive column of a discharge at medium pressures. IV.

SOURCE: Optika i spektroskopiya, v. 17, no. 2, 1964, 168-175

TOPIC TAGS: excitation, inert gas, discharge column, positive column, neon, argon, atomic energy level, ionization

ABSTRACT: The present paper is devoted to an analysis of the experimental data obtained in earlier work (ZhTF v. 30, 442, 1960 and in Opt. i spektr. v. 14, 598, 1963, v. 15, 13, 1963, and v. 15, 446, 1963). The concentration of the atoms at the metastable and resonant levels is determined within the framework of a definite model describing the excitation and ionization processes. The difference between the number of excitations and the number of second-

Card 1/2

ACCESSION NR: AP4043001

order collisions between the atoms and the electrons is determined also on the basis of the transport equation. The calculated concentrations for neon and argon are compared with experiment and agree with the assumption that the quenching does not go to the ground state but to the $2p^5 3s$ level in neon or $3p^5 4p$ level in argon. Orig. art. has: 1 figure, 19 formulas, and 4 tables.

ASSOCIATION: None

SUBMITTED: 04Jul63 ENCL: 00

SUB CODE: OP, IC NR REF SOV: 011 OTHER: 000

Card 2/2

ACCESSION NR: AP4009934 S/0057/64/0034/001/0146/0148

AUTHOR: Vorob'yeva,N.A.' Kagan,Yu.M.; Lyagushchenko,R.I.; Milenin,V.M.

TITLE: On the electron velocity distribution in the positive column of a mercury discharge. Part.2.

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 146-148

TOPIC TAGS: velocity distribution, electron velocity distribution, mercury discharge, positive column

ABSTRACT: Electron velocity distributions were measured in the positive columns of hot cathode mercury discharges at pressures from 1.2 x 10^{-3} to 5 x 10^{-2} mm Hg and currents from 20 to 500 mA. The measurements were performed by a probe method described earlier(N.A.Vorob'yeva ,Yu.M.Kagan,V.M.Milenin,ZhTF,33,571,1963). Except for an improved narrow-band amplifier, the apparatus was identical with that previously employed. The new amplifier has a gain of 6 x 10^5 and a pass band of 8 cps. The resulting improvement in the signal to noise ratio made it possible to follow the velocity distributions to higher electron energies than previously reported. The results of the measurements at 200 mA are presented in the form of graphs. At pres-

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ACC.NR: AP4009934

sures of 1.2 x 10^{-3} and 6 x 10^{-3} mm Hg, the distributions were found to be Maxwellian out to the highest electron energies recorded (12 eV and 9 3V, respectively). At 2.5 x 10^{-2} and 5 x 10^{-2} mm Hg, deviations from the Maxwell distribution were observed; fewer high energy electrons were present than required by the Maxwell function fitting the low energy portion of the distribution. At 2.5 x 10^{-2} mm Hg the electron temperature was about 12 000°K and deviations from the Maxwell distribution first became appreciable at electron energies slightly greater than 4 eV; the corresponding figures at 5 x 10^{-2} mm Hg were 9000°K and 2 eV. Possible experimental errors due to the presence of ion currents would tend to mask the observed effect, which is therefore regarded as real. Orig.art.has: 7 figures.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet im.A.A.Zhdanova (Leningrad State University)

SUBMITTED: 01Nov62 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: PH NR REF SOV: 002 OTHER: 000

Card 2/2

ACCESSION NR: AP4035690 S/0057/64/034/005/0821/0827

AUTHOR: Kagan, Yu.M.; Lyagushchenko, R.I.

TITLE: On the energy distribution of electrons in the positive column of a discharge

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.5, 1964, 821-827

TOPIC TAGS: plasma, discharge plasma, positive column, electron distribution, argon, neon

ABSTRACT: The energy distribution of electrons in an infinite plasma in a uniform electric field is discussed theoretically. The energy regions below and above the excitation energy of the first atomic level are treated separately. Inelastic collisions are neglected in the low energy region, and the electron distribution function is quoted from earlier work (Yu.M.Kagan and R.I.Lyagushchenko,ZhTF 31,445,1961). In the high energy region the effect of inelastic collisions on the asymmetric portion of the distribution function is neglected. This approximation, which is said to be valid for inert gases but not for mercury vapor, permits separate kinetic equations to be written for the symmetric and the asymmetric portions of the distri-

Card 1/3

bution function. The effect of collisions of the second kind is assumed to be small, and the kinetic equation is written as an inhomogeneous linear differential equation in which the inhomogeneous term takes account of the collisions of the second kind. The homogeneous part of the kinetic equation is solved in the WKB approximation, and the solution of the complete kinetic equation is obtained from this by a quadrature, in what appears to be an application of perturbation theory. This approximate treatment is said to be justified for the case of inert gases by the results obtained with it. Experimental data for the excitation mean free path in argon and neon (S. C.Brown, Elementary processes in gas discharge plasma) were employed in the solution of the kinetic equation. From the distribution functions thus found it is concluded that in neon and argon positive columns at moderate pressures (1 to 30 mm Hg) the electron distribution is far from Maxwellian, there being a deficit of high energy electrons. In these conditions direct ionization is rare compared with step-by-step ionization and may be neglected, as was previously concluded (Yu.M.Kagan and R.I.Lyagushchenko,ZhTF 32,192,1962). Orig.art.has: 30 formulas.

ACCESSION NR: AP4035690

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet im.A.A.Zhdanova (Leningrad State University)

SUBMITTED: 10Jun63

DATE ACQ: 20May64

ENCL: 00

SUB CODE: ME, EM

NR REF SOV: 009

OTHER: 000

Card 3/3

KAGAN, Yu.M.; LYAGUSHCHENKO, R.I.

Radial properties and contraction of a positive discharge column in inert gases at medium pressures. Zhur. tekh. fiz. 24 no.10: 1872-1878 O '54. (MLRA 7:12)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zdanova.

VOROB'YEVA, N.A.; KAGAN, Yu.M.; LYAGUSHCHENKO, R.I.; MILENIN, V.M.

Function of electron velocity distribution in a positive mercury discharge column. Part 2. Zhur. tekh. fiz. 39 no.1:146-148 Ja '64. (MIRA 17:1)

1. Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova.

L 31503-66 EWT(l)/ETC(f) IJP(c) AT SOURCE CODE: UR/0051/66/020/004/0561/0567
ACC NR: AP6013018

AUTHOR: Golubovskiy, Yu. B.; Kagan, Yu. M.; Lyagushchenko, R. I. 68 B

ORG: none

TITLE: Spectroscopic and probe investigation of a pinched discharge column. I.

SOURCE: Optika i spektroskopiya, v. 20, no. 4, 1966, 561-567

TOPIC TAGS: plasma pinch, positive column, discharge plasma, electron density, electron temperature, neon, argon

ABSTRACT: For the purpose of checking on the theory proposed by the authors to explain the contraction of the positive column of a discharge, wherein the glowing region does not fill the entire volume of the tube but is concentrated about the axis (ZhTF v. 34, 1873, 1964), the authors have measured the electron density distribution over the cross section of a discharge tube, the electron temperatures, the longitudinal fields, and the currents to the wall, in the case of discharges in neon and argon under different conditions. In the case of neon the pressures ranged from 1 to 30 mm Hg and the current from 50 to 400 ma. In argon the corresponding figures were 0.5 - 10 mm Hg and 25 - 400 ma. The electron density n_e, the electron temperature T_e, and the longitudinal field intensity E were measured by

UDC: 537.523/.527

Card 1/2

L 31503-66
ACC NR: AP6013018

the two-probe method on the tube axis and at distances 3, 6, and 9 mm from the axis. The current to the wall was measured with a wall probe. The results are presented in the form of tables and graphs, and all agree with the proposed theory. Orig. art.has: 8 figures, 3 formulas, and 8 tables.

SUB CODE: 20/ SUBM DATE: 27Jan65/ ORIG REF: 005

Card 2/2 mc

L 02281-67 EWT(1)/T IJP(c) AT

ACC NR: AP6025243 SOURCE CODE: UR/0057/66/036/007/1198/1201

AUTHOR: Borodin,V.S.; Kagan, Yu.M.; Lyagushchenko,R.I.

50
B

ORG: none

21

TITLE: Investigation of a hollow cathode discharge. 2.

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 7, 1198-1201

TOPIC TAGS: gas discharge, hollow cathode, electric field, electron energy, electron distribution

ABSTRACT: This paper is a sequel to an earlier paper by V.S.Borodin and Yu.M.Kagan (ZhTF, 36, 181, 1966) in which the experimental techniques were described and the earlier results presented. The previous work showed that the electron energy distribution in a hollow cathode differs from that in a positive column in that itx maximum occurs at a lower electron energy and it falls off less rapidly with increasing energy. Probe measurements in a 10 cm long 2 cm diameter hollow cathode have now shown, in agreement with the findings of E.Badareu and I.Popescu (Phys. Rev., 5, No. 1, 1960 /Abstractor's note: the reference appears to be to Rev. de Physique, Bucharest/), that the electric field within a hollow cathode is very weak. Measurements of the electron energy distribution within the hollow cathode were extended beyond the previous upper limit of 40 eV to some hundreds of eV with the aid of a two-grid electrostatic analyzer.

UDC: 537.525

Card 1/2

L 02281-67

ACC NR: AP6025243

It was found that the distribution function has a second maximum at an electron energy close to the energy of the cathode drop (several hundred eV in the present experiments). A simple kinetic calculation in which excitation and stepwise ionization were neglected and it was assumed that electrons of energy corresponding to the cathode drop appear at a uniform rate throughout the volume within the hollow cathode gave a theoretical electron energy distribution that is in qualitative agreement with the distribution observed near the wall of the cathode. The electron energy distribution observed at the center of the hollow cathode differed from the theoretical distribution in having a sharper maximum and fewer fast electrons. Orig. art. has: 5 formulas and 5 figures.

SUB CODE: 20 SUBM DATE: 03Jul65 ORIG. REF: 002 OTH REF: 002

Card 2/2 vmb

ACC NR: AP7000022 SOURCE CODE: UR/0051/66/021/005/0525/0531

AUTHOR: Golubovskiy, Yu. B.; Kagan, Yu. M.; Lyagushchenko, R. I.

ORG: none

TITLE: Spectroscopic and probe investigation of a pinched discharge column. II

SOURCE: Optika i spektroskopiya, v. 21, no. 5, 1966, 525-531

TOPIC TAGS: gas discharge, plasma pinch, line intensity, neon, argon, spectral distribution, pressure effect

ABSTRACT: Part I was devoted to the radial variation of the characteristics of a pinched discharge column (Opt. i spektr. v. 20, 561, 1966). The present investigation is devoted to the radial distribution of the line intensities and a comparison with theory. The theoretical formulas for the comparison were derived by the authors earlier (ZhETF v. 34, 1873, 1964). The measurements were made in the positive column of neon and argon at the same current and pressure intervals as in part I, but the discharge tube was different in that there were no probes and there were two flat windows on the ends. The radial intensity distribution was investigated in neon in the lines 6929, 6506, 5764, and 5330 Å, and in argon in the lines 7503, 4300, 4259, 6871, 5888, and 5187 Å. The line intensity was corrected for reabsorption in the usual manner. The experiment has shown that the radial dependence of the different line intensities agreed within the limits of errors. The contraction of the pinch increased with increasing pressure for all lines. A decrease in the current likewise

Card 1/2 UDC: 537.523/.527

ACC NR: AP7000022

resulted in contraction of the pinch. The experimental results are found to agree with theoretical calculations of the light flux distribution with allowance for the finite dimensions of the monochromator slit and other factors. Orig. art. has: 12 figures and 3 formulas.

SUB CODE: 20/ SUBM DATE: 27Jan65/ ORIG REF: 003

Card 2/2

LYAGUSHEV, N.

Establishment of programs for popular universities of technical progress. NTO 6 no.5:52-54 My '64. (MIRA 17:8)

1. Uchenyy sekretar' soveta Moskovskogo gorodskogo narodnogo universiteta tekhnicheskogo progressa i ekonomicheskikh znaniy.

LYAGUSHEV, N.

Following the initiative of scientists of the capital.
NTO 5 no.1:17-21 Ja '63. (MIRA 16:5)

1. Uchennyy sekretar' Moskovskogo gorodskogo narodnogo universiteta tekhnicheskogo progressa i ekonomicheskikh znaniy.
(Moscow--Technical education) (Moscow--Research, Industrial)

LYAGUSHEV, N. Ye.

People's universities of technical development and economic sciences. Mashinostroitel' no.10:44 O '62. (MIFA 15:10)

(Technical education)

LYAGUSHIN, F.A.

State of pharmaceutical service to the people of Stalino Province. Apt. delo 2 no.3:8-9 My-Je '53. (MLRA 6:6)

(Stalino Province--Pharmacy)

LYAGUSHIN, F. I.

Lyagushin, F. I. "Raising young pigs on solid fodders with various preparation." Min Higher Education Ukrainian SSR. Khar'kov Zootechnical Inst. Khar'kov, 1956. (Dissertation for the Degree of Candidate in Agricultural Science)

So: Knizhnaya letopis', No. 27, 1956. Moscow. Pages 94-109; 111.

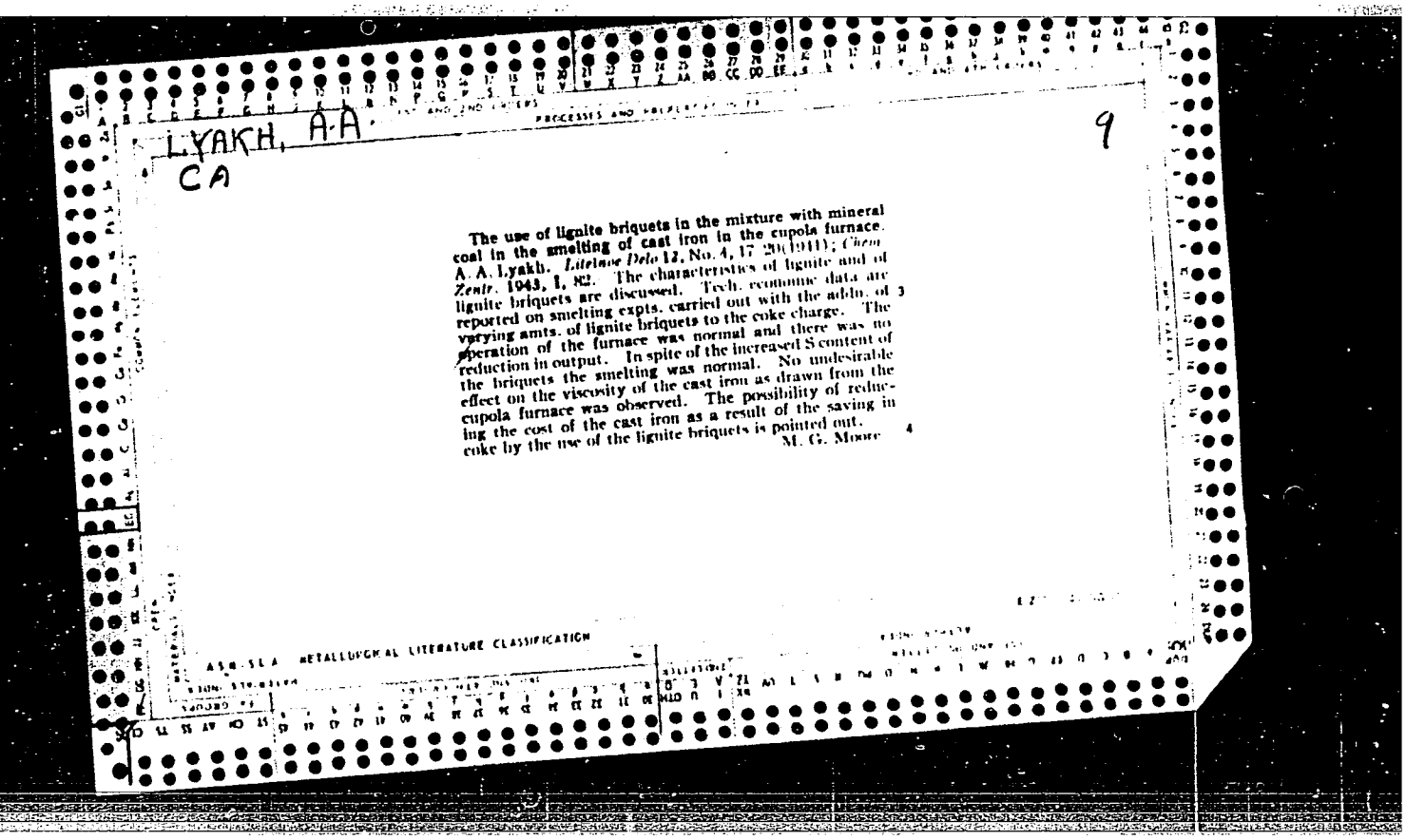
LYAGUSHKIN, A. V., Master Vet Sci -- (ulss) "The preventive treatment against [redacted] infectious entero-toxemia of sheep." Moscow, 1957, 15pp (All-Union Inst of Exper Vet Sci), 150 copies. (KL, No 39, 1957, 97)

LYAK, S., inzh.

Borisoglebsk Forest Road Construction Administration expands the network of local roads. Avt.dor. 27 no.12:25 D '64.
(MIRA 18:2)

LYAK, S., inzh.

Road construction in the northern part of Yaroslavl Province. Avt.dor. 28 no.6:11-12 Je '65. (MIRA 18:8)



LYAKH, A.A.
CA

9

The use of lignite briquets in the mixture with mineral coal in the smelting of cast iron in the cupola furnace. A. A. Lyakh. *Liteinoe Delo* 12, No. 4, 17–20(1941); *Chem. Zentr.* 1943, I, 82. The characteristics of lignite and of lignite briquets are discussed. Tech.-economic data are reported on smelting expts. carried out with the addn. of 3 varying amts. of lignite briquets to the coke charge. The operation of the furnace was normal and there was no reduction in output. In spite of the increased S content of the briquets the smelting was normal. No undesirable effect on the viscosity of the cast iron as drawn from the cupola furnace was observed. The possibility of reducing the cost of the cast iron as a result of the saving in coke by the use of the lignite briquets is pointed out. 4

M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PYATYSHKIN, N.M.; LYAKH, A.A.

Ceramic radiators for gas-operated tube boilers. Gaz.prom. 5 no.9:21-25 S '60. (MIRA 13:9)
(Boilers) (Radiators)

LYAKH, A.A., inzh.; SHAPIRO, A.V., inzh.

Reaping attachment to the SK-3 combine for harvesting low-growing grain crops. Trakt. i sel'khozmash. 30 no.9:38-39 S '60.
(MIRA 13:9)

1. Gosudarstvennoye spetsial'noye konstruktorskoye byuro po samokhodnym kombaynam.
(Combines (Agricultural machinery))

PYATYSHKIN, N.M.; LYAKH, A.A.

Testing a water heater with an improved gas burner and with a radiator insert. Gaz. prom. 7 no.4:28-30 '62 (MIRA 17:7)

PYATYSHKIN, N.M.; LYAKH, A.A.

Improved performance of gas stove burners. Gaz.prom. 6 no.7:12-16 '61.
(MIRA 17:2)

LYAKH, A.A.

Investigation of the operation of hearth burners with stepped slits. Gaz. delo no.10:63-64 '63. (MIRA 17:4)

1. Nauchno-issledovatel'skiy institut sanitarnoy tekhniki Akademii stroitel'stva i arkhitektury UkrSSR.

ALENT'YEV, A.A. [Alent'iev, O.O.], doktor tekhn. nauk (deceased);
LYAKH, A.A. [Liakh, O.O.]

Effect of heat treatment on the processes taking place in optical glass. Khim. prom.[Ukr.] no.1:31-32 Ja-Mr '65. (MIRA 18:4)

IYAKH, A.A. [Liakh, O.O.]

Calculating the specific heat capacity of industrial glass. Khim. prom. [Ukr.] no.2:30-31 Ap-Je '65. (MIRA 18:6)

KAL'BERGENOV, G.K.; LYAKH, A.I.; KONSTANTINOVA, A.D.; KHLOP, N.I.

Fertilizer mixed with insecticide. Zashch. rast. ot vred. i bol. 7 no.8:35 Ag '62. (MIRA 15:12)

1. Institut sel'skogo khozyaystva nechernozemnoy zony, pochtovoye otdeleniye Nemchinovak, Moskovskoy oblasti. (for Kal'bergenov, Lyakh).
2. Saratovskaya toksikologicheskaya laboratoriya Vsesoyuznogo instituta zashchity rasteniy (for Konstatinova, Khlop).
(Fertilizers and manures) (Insecticides)

KAL'BERGENOV, G.K.; LYAKH, A.I.; FEDOROV, I.V., agronom po zashchite rasteniy

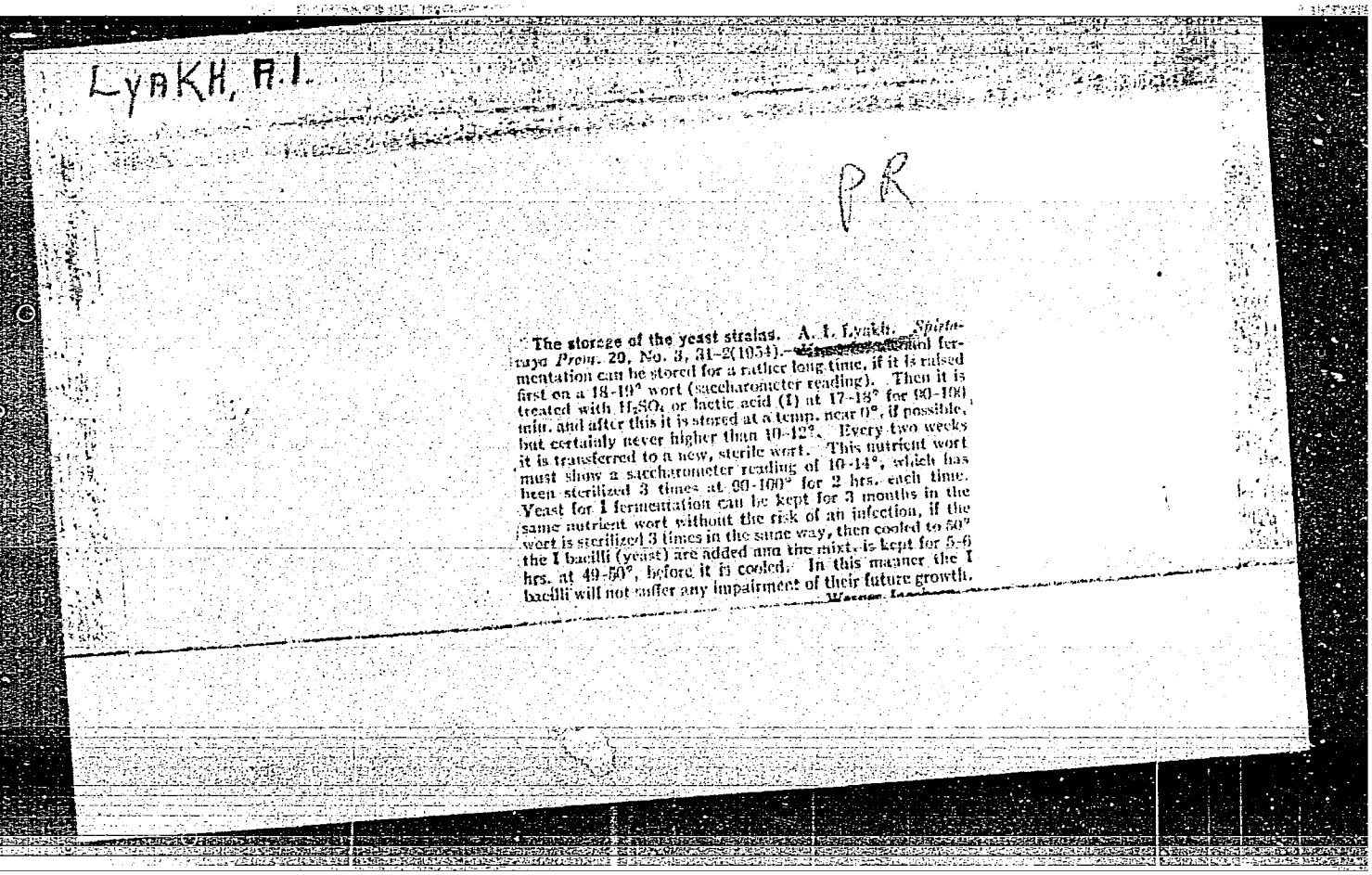
Effectiveness of smoke pots. Zashch. rast. ot vred. i bol. 7 no. 11:35-36 N '62. (MIRA 16:7)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva nechernozemnoy zony i Volokolamskoye territorial'noye sovkhozno-kolkhoznoye upravleniye.

CA LYAKH, A. I.

Apparatus for purification of mercury. A. I. Lyakh. *Zavodskaya Lab.* 16, 1403(1950).—The app. consists of a long vertical glass spiral with appropriate feed reservoirs and receptacles. The down-flowing Hg contacts dil HNO_3 and is sepd. at the bottom by means of a separatory funnel arrangement. The waste acid soln. overflows into a waste receptacle, thus giving true countercurrent operation. Some 2-3 kg. per hr. can be handled. G. M. K.

Kyakh State U. im. S. M. Kirov



LyaKH, A.I.

PR

The storage of the yeast strains. A. I. Lyakh. *Spirtovaya Prom.* 20, No. 3, 31–2(1954).—[redacted] fermentation can be stored for a rather long time, if it is raised first on a 18–19° wort (saccharometer reading). Then it is treated with H_2SO_4 or lactic acid (I) at 17–18° for 90–100 min. and after this it is stored at a temp. near 0°, if possible, but certainly never higher than 10–12°. Every two weeks it is transferred to a new, sterile wort. This nutrient wort must show a saccharometer reading of 10–14°, which has been sterilized 3 times at 90–100° for 2 hrs. each time. Yeast for I fermentation can be kept for 3 months in the same nutrient wort without the risk of an infection, if the wort is sterilized 3 times in the same way, then cooled to 50° the I bacilli (yeast) are added and the mixt. is kept for 5–6 hrs. at 49–50°, before it is cooled. In this manner the I bacilli will not suffer any impairment of their future growth.

[redacted]

8(0), 24(0) SOV/112-59-2-3280

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 2, pp 150-151 (USSR)

AUTHOR: Lyakh, A. I.

TITLE: Some Techniques of Polarographic Analysis
(O nekotorykh voprosakh tekhniki polyarograficheskogo analiza)

PERIODICAL: Sb. tr. Vses. n.-i. in-ta tsvetn. met., 1956, Nr 1, pp 174-180

ABSTRACT: Causes of and methods for eliminating troubles occurring in polarographic analysis are considered. Selection and preparation of the room, galvanometer installation, servicing supply sources, preparation of the calomel electrode, mercury purification, etc., are considered.

Card 1/1

137-58-4-8692

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 339 (USSR)

AUTHOR: Lyakh, A. I.

TITLE: Some Aspects of Polarographic Technique (O nekotorykh voprosakh tekhniki polyarograficheskogo analiza)

PERIODICAL: Sb. tr. Vses. n.-i. in-ta tsvetn. met., 1956, Nr 1, pp 175-180

ABSTRACT: Attention is drawn to certain problems in the technical equipment of polarography apparatus, and the most important factors affecting the operation of polarographs (P) are noted. The air in the polarography room must not contain acid, ammonia, or aggressive gas fumes. The lead from the galvanometer must be shielded cable (i.e., type MRGPE) or wire in metal conduits. The galvanometer housing and the shielding of the leads must be grounded. Should the galvanometer pencil of reflected light show fluctuations in either direction when the electrolyzer and battery are switched off, it would indicate poor grounding and shielding of the wires. The polarograph slide wire should be under voltage for 5 to 10 min prior to polarography so as to enable battery voltage to reach a stable level. For higher capacitance and

Card 1/2

Some Aspects of Polarographic Technique

stability in operation, the half cell has to be made of freshly-precipitated calomel. The finer the trituration of the calomel paste with the drops of Hg, the more stable will be the functioning of the element and the greater will be its capacitance. When the electrolyzer is fastened to a metal base, the point of attachment must be insulated. To protect the Hg from contamination with S, the rubber connecting pipes must first be well treated with caustic. The Hg in the bulb and the equalizer tube must always have a mirror-clean surface. If the Hg is not contaminated by noble metals, it may be cleansed rather rapidly by blowing air through the contanimated Hg in a solution of mercurous nitrate and HNO_3 (5-8% solutions). To prevent electrification of the P, the worktables and the like, the P must be well grounded by connecting the negative pole of the battery to a ground wire. Sometimes the polarographer himself may pick up a strong electrostatic charge, in which case he must discharge his body before starting work by making contact with a grounded lead.

1. Polarographic analysis--Equipment

N.G.

Card 2/2

137-58-4-8694

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 339 (USSR)

AUTHOR: Lyakh, A. I.

TITLE: A Mechanical Coulometer (Mekhanicheskiy kulonometr)

PERIODICAL: Sb. tr. Vses. n.-i. in-ta tsvetn. met., 1956, Nr 1, pp 189-196

ABSTRACT: A description is presented of a coulometer made from the basic parts of an ordinary dc current meter. The counting mechanism and shunt are replaced by a light source producing a narrow beam of light, a photoelectric cell, and a small cylinder of black paper mounted on the rotor. The cylinder has two diametrically opposed apertures through which the beam of light from the light source periodically strikes the photoelectric cell as the armature turns. The signal from the photoelectric cell is transmitted to a 6P3S tube and an electromagnetic counter, the low-ohmic winding of which has been replaced by a high-ohmic. The scale on the rotor periphery makes it possible to read 0.005 of a rotation. Reading is by means of the counter plus fractions of armature rotations. The coulometer operates when current is 0.001 amp and voltage is 0.005 v and more. Accuracy is within

Card 1/2

137-58-4-8694

A Mechanical Coulometer

0.1%. The system is powered from an ac network via a kenotron rectifier.
S.S.

1. Coulometers--Design 2. Electric currents--Measurement--Equipment

Card 2/2

LYAKH, A.I.

AUTHORS: Lyakh, A. I., Lisitsinna, Ye. V., and Shisterova, Z. N.

TITLE: Decomposition of Batches by Fusion is Applicable to Polarographic Detection of Copper, Zinc, Lead and Cadmium (Razlozheniye navesok splavleniyem primenitel'no k polyarograficheskomu opredeleniyu medi, tsinka, svintsa i kadmiya)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, No. 1, pp. 20-23 (U.S.S.R.)

ABSTRACT: The authors followed the method suggested by P. M. Isakov (1) for detecting the presence of Cu, Zn, Pb, and Cd, which consists of decomposition of the material analyzed with fusion with ammonium salts. The decomposition required 5 to 7 minutes. Specimens from different Altaic enterprises were used and were previously analyzed by other means. Ammonium chloride and ammonium nitrate in proportions of 50:50 were found to give the best salt admixture, which had to exceed the analyzed material in quantity by two or three times. The steps of the analysis are described and illustrated by tables showing: comparative results by the acid and dry methods for, respectively, Cu, Zn, Pb, and Cd. The final step in the analysis was the polarographic detection of the metals mentioned in the fused

Card 1/2

Decomposition of Batches by Fuzion is Applicable of Polarographic Detection of Copper, Zinc, Lead and Cadmium

and decomposed mixture of the specimen and the salt. 1 Slavic reference.

ASSOCIATION: All-union Scientific Research Mining & Metallurgical Institue of Non-ferrous Metals

PRESENTED BY:

SUBMITTED:

AVAILABLE:

Card 2/2

MATVEYEVA, M.D., nauchnyy sotrudnik (Chita); OGNEV, I.M.; LOGOVA, M.G.; BADULIN, A.V., kand.biolog.nauk; ROKTANEN, L.P.; KAL'BERGENOV, G.K.; LYAKH, A.I.; PETROVA, L.A.

Effectiveness of entobacterin. Zashch.rast. ot vred. i bol. 9 no.11:26-27 '64. (MIRA 18:2)

1. Zaveduyushchaya Minskim entomo-fitopatologicheskim uchastkom (for Logova). 2. Kustanayskaya opytnaya sel'skokhozyaystvennaya stantsiya (for Badulin). 3. Zaveduyushchiy kafedroy zashchity rasteniy TSelinogradskogo sel'skokhozyaystvennogo instituta (for Roktanen). 4. Toksikologicheskaya laboratoriya, pochtovoye otdeleniye Tolstopal'tsevo, Moskovskoy oblasti (for Kal'bergenov, Lyakh). 5. Zaveduyushchaya laboratoriyey biometoda, Lubny, Poltavskoy oblasti (for Petrova).

LYAKH, D.G.

Concretions in Akchagyl deposits of the Balkhan region in southwestern Turkmenistan. Izv.AN Turk.SSR.Ser.fiz.-tekh., khim.i geol.nauk no.3:122-125 '61. (MIRA 14:7)

1. Institut geologii AN Turkmenskoy SSR i Turkmenskiy sel'skokhozyaystvennyy institut im. M.I.Kalinina.
(Balkhan region--Concretions)

LYAKH, G.D.; BUTORINA, A.N.

Hygienic working conditions and the possibility of developing pneumokoniosis in the cement plants of Kazakhstan. Trudy Inst. kraev.pat.AN Kazakh. SSR 9:65-73'61. (MIRA 16:7)
(KAZAKHSTAN--CEMENT INDUSTRIES--HYGIENIC ASPECTS)
(KAZAKHSTAN--LUNGS--DUST DISEASES)

LYAKH, G.D.

Effect of sulfurous anhydride on the incidence of disease with a temporary loss of the working capacity in workers at the metallurgical plant of the Balkhash Copper Smelting Combine. Trudy Inst.kraev. pat. AN Kazakh. SSR 9:214-223'61.
(MIRA 16-7)

(SULFUR DIOXIDE—TOXICOLOGY)
(BALKHASH—SMELTING—HYGIENIC ASPECTS)

LYAKH, G.D.

Hygienic evaluation of the cyclone method of smelting in copper matallurgy. Trudy Inst.kraev.pat AN Kazakh. SSR 9:224-228'61. (MIRA 16:7)

(SULFUR DIOXIDE--TOXICOLOGY)
(SMELTING--HYGIENIC ASPECTS)

LYAKH, G.D.

ways to sanitize the working conditions in cement plants. Trudy Inst. kraev.pat. AN Kazakh. SSR 10:16-23 '62. (MIRA 16:5)
(CEMENT INDUSTRIES--HYGIENIC ASPECTS)

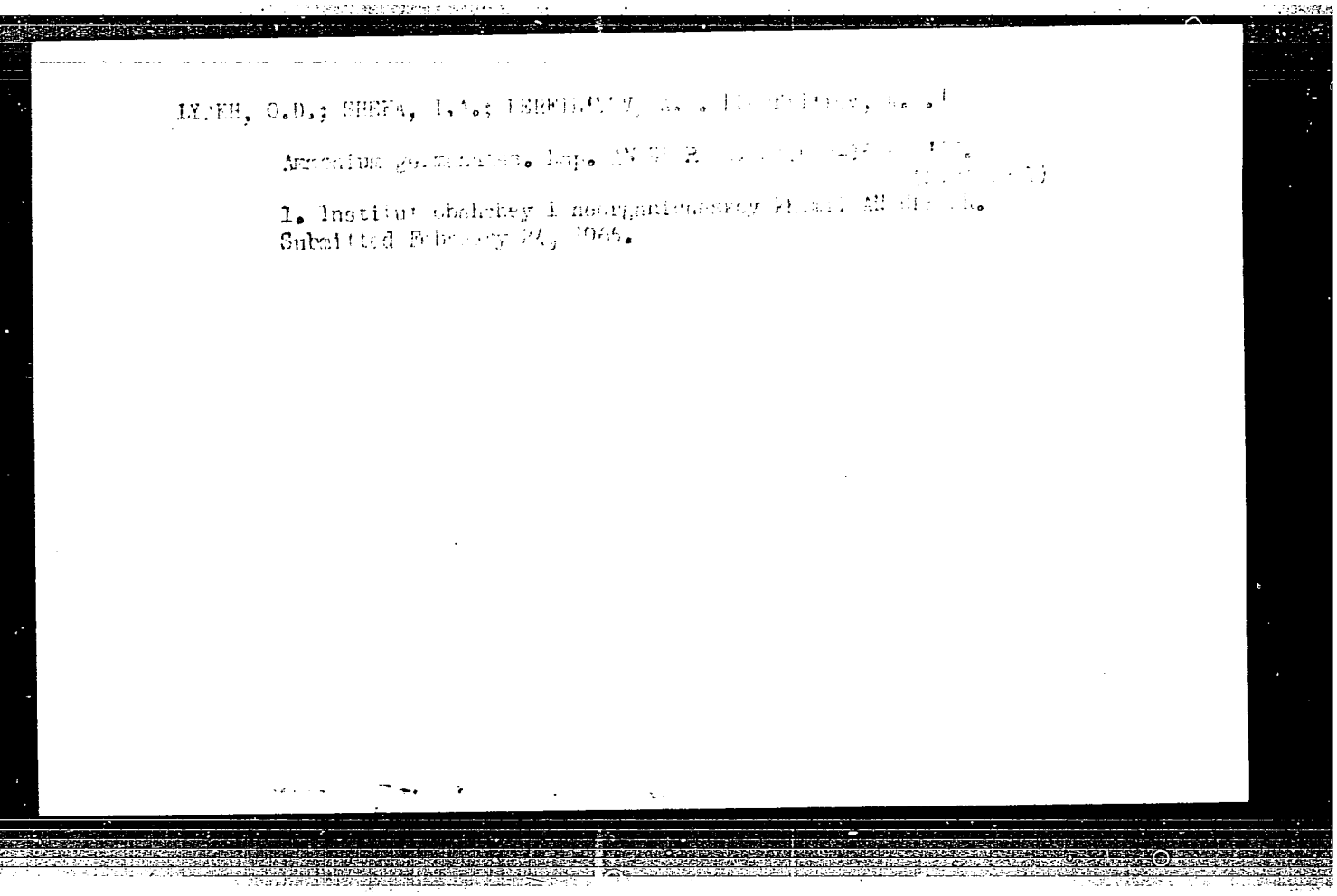
LYAKH, G.D.

Retention of sulfur dioxide in human body during respiration.
Trudy Inst.kraev.pat. AN Kazakh.SSR 10:212-221 '62.
(MIRA 16:5)

(RESPIRATION) (SULFUR DIOXIDE—PHYSIOLOGICAL EFFECT)

LYAKH, Nikita Nikiforovich; SEL'KINA, D.G., red.; GOSTISHCHEVA, Ye.M., tekhn. red.

[Notes of an explorer in the Arctic] Zapiski poliarnika. Novosibirskoe knizhnoe izd-vo, 1961. 218 p. (MIRA 15:6)
(Arctic regions)



LYAKH, O.D.; SHEKA, I.A.; PERFIL'YEV, A.I.

Reaction of germanium dioxide with ammonia and urotropine in aqueous solutions. Zhur.neorg.khim. 10 no.8:1822-1826 Ag '65. (MIRA 19:1)

1. Laboratoriya instituta obshchey i neorganicheskoy khimii AN UkrSSR. Submitted October 8, 1964.

LYAKH, P.K.; RUDOMAN, V.P.; VOLODARSKIY, A.V.

Large-block assembly of blast furnace shaft jackets. Metallurg 9 no.4:10-12 Ap '64. (MIRA 17:9)

1. Zhdanovskoye stroitel'no-montazhnoye upravleniye "Yuzhdomnaremont."

LYAKH, P.Kh., inzh.

Simple and available to every farm. Mekh. sil' hosp. 12 no. 2:28 F '61. (MIRA 14:4)

1. Kolkhoz im. Il'icha, Aleksandrovskogo rayona, Luganskoy oblasti.
(Milking machines)

Lyakh, R.A.

S/035/60/000/01/02/008

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 1, p. 17, # 195

AUTHOR: Lyakh, R. A.

TITLE: On the Problem of Atmosphere Resistance Effect on the Motion of Artificial Satellites

PERIODICAL: Byul. In-ta teor. astron. AN SSSR, 1959, Vol. 7, No. 5, pp. 321-326 (Engl. summary)

TEXT: Chzhan Yuy-chzhe and Chzhan Tsze-syan investigated the effect of atmospheric resistance on the motion of an artificial Earth's satellite (RZhAstr, 1958, No. 10, # 6681) and calculated only secular perturbations of the great semi-axis a and eccentricity e with an accuracy up to the first power of eccentricity. Employing the same method and the same law of air density distribution, the author obtains secular and periodic perturbations of a and e of an artificial Earth's satellite with an accuracy up to third-order magnitude inclusive, relative to eccentricity.

N. S. Ya.

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A001/A001

13.2000

AUTHOR: Lyakh, B. A.

TITLE: Some Changes in the Method of Expanding the Perturbation Function

PERIODICAL: Byulleten' Instituta Teoreticheskoy Astronomii, 1959, Vol. 7, No. 6, pp. 422-432

TEXT: The integration of differential equations describing perturbations of orbital elements necessitates expansion of the perturbation function in a series, which is performed in two stages. In the first stage, the circular motion is considered, and in the second stage corrections are introduced due to actual motion in ellipses and the function is expanded in powers of eccentricities. For the expansion of the perturbation function in the first stage there exist two methods applicable for the case of large mutual inclination of the orbits, denoted by J. One method was used by Tisserand in 1889 and the other by Yelenevskaya in 1952. The second method is very cumbersome and the former is inconvenient for integration. Therefore the author proposes the third method consisting in representing the perturbation function in the following form:

$$R = \sum_{i,j} \bar{b}^{i,j}(\alpha, J) \cos(iL' + jL). \qquad (3)$$

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Some Changes in the Method of Expanding the Perturbation Function

which is close to that of Tisserand but more convenient for subsequent operations. The perturbation function for one of two material points m and m_1 moving around central point m_o is expressed by the formula:

$$R = k^2 m_1 \left(\frac{1}{\Delta} - \frac{rr_1 \cos H}{r_1^3}\right)$$

where r and r_1 are distances from point m_o to points m and m_1 respectively; H is the angle between directions from m_o toward m and m_1; Δ is separation between m and m_1 defined by the equation:

$$\Delta^2 = r^2 - 2rr_1 \cos H + r_1^2,$$

and

$$\cos H = \cos L' \cos L + \sin L' \sin L \cos J,$$

where L and L^1 are mean longitudes of points m and m_1. In the case of circular motion radii of circular orbits a and a^1 are substituted instead of r and r_1, their ratio is denoted by symbol α. The author expands the perturbation function in powers of ratio α, assumed to be < 1, using the known formula expressing separation Δ in terms of Legendre polynomials of order n. He introduces auxiliary

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Some Changes in the Method of Expanding the Perturbation Function

quantities ν and μ defined as follows:

$$\nu = \sin^2 \frac{J}{2}, \qquad \mu = \cos^2 \frac{J}{2}.$$

Legendre polynomials are represented as sums of the cosines of multiples of L and L', and the cosines are given the exponential form by means of Euler's formula. Then the author makes use of the known recurrent relation connecting Legendre polynomials and derives the formulae for calculating the coefficients. For the latter purpose he applies the method usually used in calculating the coefficients of Fourier series. In addition to formulae, he tabulates the values of coefficients in Appendix 1 for the values of n from 2 to 5. The final expression for the expansion of the perturbation function is given by the formula:

$$R = \frac{k^2 m_i}{a'} \sum_{n=2}^{\infty} \alpha^n \sum_{k'=0}^{E(\frac{n}{2})} \sum_{k=0}^{n} a_{k'k}^{(n)} (\nu,\mu) \cos[(n-2k')L' + (n-2k)L]. \qquad (20)$$

where $E(\frac{n}{2})$ is the integer part of the relation $\frac{n}{2}$.

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Some Changes in the Metnod of Expanding the Perturbation Function

By means of a re-grouping of summands in the right-hand part of this formula it car be reduced to the form of expansion (3):

$$R = \frac{k^2 m_1}{a'} \sum_{i=0} \sum_{j=-\infty} \overline{b}^{ij} (\alpha, \nu, \mu) \cos (iL' + jL). \qquad (21)$$

The author points out, however, that the use of formula (20) is more expedient in cases when it is possible to retain, when solving some particular problem, the terms with small powers of α only. In the second stage of expansion, the perturbation function can be expanded in a series in powers of eccentricities by Newcomb's metnod (1895) in the form corresponding to an expansion in mean anomalies. If, in expanding the perturbation function, only the terms are taken which contain factors $\alpha^m e^n e'^{n'}$ such that $2m + n + n' \leqslant 8$, the numerical values of almost all coefficients of Newcomb's operators needed can be taken from the work of Sh. G. Snaraf, 1955, Teoriya dvizheniya Plutona (Theory of Pluto's motion), Tr. ITA, Vol. 4. After performing the expansion of formula (20) in powers of eccentricities, the

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Some Changes in the Method of Expanding the Perturbation Function

author derives for the perturbation function the following expression:

$$R = \frac{m_1 k^2}{a'} \sum A^{m,n,n'}_{i,j,k,l} \alpha^m e^n e'^{n'} \cos (iL' + jL + kM' + lM).$$

The values of coefficients $A^{m,n,n'}_{i,j,k,l}$ for the case of $2m + n + n' \leqslant 8$ are tabulated in Appendix 2. There are 4 references: 2 Soviet, 1 American and 1 French.

SUBMITTED: March 7, 1959.

Abstracter's note: Appendices 1 and 2 were not attached to the article.

Card 5/5

LYAKH, R. A., Cand Phys-Math Sci -- (diss) "Disordered motion in the three-body stellar problem." Leningrad, 1960. 5 pp; (Academy of Sciences USSR, Main Astronomical Observatory); 200 copies; price not given; (KL, 50-60, 131)

S/035/60/000/010/014/021
A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 10, pp. 48-49, # 10090

AUTHOR: Lyakh, R. A.

TITLE: On Determining the Longitude of Ascending Node of Some Eclipsing Variables

PERIODICAL: Byul. In-ta teor. astron. AN SSSR, 1960, Vol. 7, No. 8, pp. 588-598 (German summary)

TEXT: Position of ascending node of the orbit of an eclipsing variable affects neither the luminosity curve nor the curve of radial velocities, due to which fact the longitude of ascending node can not be determined from photometric or spectroscopic observations. The author points out a possibility of determining the longitude of ascending node, if the eclipsing variable is a component of a visual binary and if noticeable perturbations exist at least in one of elements of the eclipsing variable orbit. A method is proposed for determining the longitude of ascending node of the orbit from the known secular shift of the

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On Determining the Longitude of Ascending Node of Some Eclipsing Variables

apsides line caused by the presence of a third sufficiently remote component. The multiple ζ Cnc system is considered as example. Star C with dark satellite D is considered as one with a mass value equal to the sum of masses of C and D stars. The longitude of the node of the B star orbit relative to the A star is determined. There are 6 references.

N. S. Yakhontova

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

NAZARENKO, V.A.; LEBEDEVA, N.V.; VINAROVA, L.I.; Prinimala uchastiye:
LYAKH, R.A.

Complexometric determination of tetravalent germanium. Zhur.
anal. khim. 19 no. 1:87-89 '64. (MIRA 17:5)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSSR,
Laboratorii v Odesse.

LYAKH, R.A.

General calculation of Newcomb operators. Uch. Zap. LGU no.323:183-191 '64. (MIRA 17:12)

LYAKH, Vasiliy Fedorovich, Geroy sotsialisticheskogo Truda;
KAL'NITSKIY, R.Ya. [Kal'nyts'kyi, R.IA.], red.;
LIMANOVA, M.I. [Lymanova, M.I.], tekhn. red.

[Collective farm resources in action] Kolhospni rezervy - v diiu. Kharkiv, Kharkivs'ke kryzhkove vyd-vo, 1963. 32 p.
(MIRA 17:1)

1. Upravlyayushchiy kolkhoza imeni Lenina Val'kivskogo rayona, Khar'kovskoy oblasti (for Lyakh).

LYAKH, V.M., inzh.; GALKIN, V.I., inzh.

Results of testing new beet cultivators. Mekh. i elek. sots. sel'khoz. 21 no.4:53-57 '63. (MIRA 16:9)

1. Ukrainskaya mashinoispytatel'naya stantsiya.
(Cultivators)

ROYTER, I.M., doktor tekhn. nauk; KOVALENKO, A.Ya., inzh.;
LYAKH, Ye.V., inzh.

Effect of salt in rye leaven on the intensity of biochemical processes and quality of bread. Pishch. prom. no.1:55-64 '65. (MIRA 18:11)

KUVAYEV, YU. F., LYAHI, V. YA., MARSHAK, YU. L.

Steam Boilers

Deformation of a laminated air preheater at increased drop of air and gas pressure.
Elek. sta. 23 no. 4 (1952)
Kand. Tekhn. Nauk

SO: Monthly List of Russian Accessions, Library of Congress, August 1953, Uncl.

IZYUMOV, M.A., inzh.; KUTMAN, B.L.; LYAKH, V.Ya., inzh.; KHZMALYAN, D.M., kand.tekhn.nauk

Conversion of a TKP-3 boiler to firing coal dust in plane parallel jets. Teploenergetika 10 no.2:11-14 F '63. (MIRA 16:2)

1. Upravleniye energeticheskoy promyshlennosti Soveta narodnogo khozyaystva Permskogo ekonomicheskogo administrativnogo rayona i Moskovskiy energeticheskiy institut.
(Boilers)

GAVRILOV, A.F., inzh.; LYAKH, V.Ya.

Air heaters with an intermediate heat carrier. Teploenergetika 12 no.3:11-17 Mr '65. (MIRA 18:6)

1. Vsesoyuznyy teplotekhnicheskiy institut.

Lyakhin, B. P.

Investigation of the Production of Ferroboron and Nickel-boron from Borate Ores. B. P. Lyakhin. (*Stal'*, 1955, (12), 1104–1112). [In Russian]. It has been shown by small and large scale tests that rich ferroboron or nickel-boron can be produced from borate ores (about 27% B_2O_3) either by aluminothermic or arc furnace methods, the latter being the more advantageous. The aluminothermic method with potassium chlorate gave ferroboron containing 13–14% B and 5–6% Al, the boron recovery being 62–65%. The corresponding figures for the arc furnace alloy which also contains 3–4% Si are 12–13%, 3–4% and 60%, a 38–40% saving of aluminium being achieved. Satisfactory nickel-boron (9–14% B, 3–8% Al) was obtained in a small arc furnace with boron recovery of 30–60%. Beneficiation of the borate ores is essential for high-quality ferro-alloys.—S. K.

LYAKHIN, B.P., inzhener.

Studying the extraction of ferroboron and nickel-boron from borate ores. Stal' 15 no.12:1104-1112 D '55. (MLRA 9:2)

1.Institut ferrosplavov tsentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii.
(Iron alloys) (Nickel alloys)

S/764/61/000/000/002/003

AUTHORS: Karsanov, G.V., Lyakhin, B.P., Magidson, I.A., Odoyevskiy, L.S., Tirkina, A.N., Engineers; Mikhina, V.N., Orlova, S.Ye., Candidates of Technical Sciences.

TITLE: Problems of the technology of metallic Chrome.

SOURCE: Razvitiye ferrosplavnoy promyshlennosti SSSR. Ed. by N.M. Dekhanov and others. Kiyev, Gostekhizdat USSR, 1961, 205-217.

TEXT: The paper reports briefly the results of experimental investigations performed at the Laboratory of Pure Metals and Alloys, TsNIICherMet (Central Scientific Research Institute of Ferrous Metallurgy). The direct objective of the investigation is the development of a method for the making of metallic Cr that would obviate the defects (primarily the elevated content of impurities) exhibited by the aluminothermic method currently prevailing in the USSR. A brief state-of-the-art report comprises two graphic summaries of the processing of Cr-containing ores and the technology of the production of Cr_2O_3 and CrO_3. Following a brief cost comparison as obtained from various sources it is stated that the utilization of chlorchrome as an initial source material broadens the perspectives of the making of pure chrome and reduces the production costs significantly. The waterless

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chromechloride can be obtained directly from a chloridation of Cr ores with a minimal number of process operations and a high degree of purity. The present investigation was based primarily on a chloridation of briquets of ore and a C-containing reducer by gaseous Cl at high T, the removal of the chlorides of Cr, Fe, Al, and other elements, and their subsequent selective condensation. A schematic block diagram shows the process procedure for the obtainment of $CrCl_3$. The laboratory experiments show that under suitable process conditions the Cr is practically completely removed into the sublimate. The process is almost total at 800°C, but up to 850° it still proceeds slowly. A faster rate is obtained at 900-950°, but a further increase in temperature does not accelerate the process substantially. Hard coal was found to be the most inexpensive reducer. A cost comparison indicates the cost advantage of the new process. Electrolytic methods were tested at the Laboratory of Pure Metals and Alloys of the TsNIICherMet for the production of metallic Cr, including: (a) The electrolysis of aqueous solutions of CrO_3, (b) the electrolysis of polychromatic solutions, (c) the electrolysis of aqueous solutions of salts of the trivalent Cr, primarily $CrCl_3$, and (d) the electrolysis of $CrCl_3$ in salt fusions. The TsNIICherMet developed the electrolytic method of the making of metallic Cr from aqueous solutions of CrO_3 and introduced them into semi-industrial production at the Experimental Factory of the TsNIICherMet in 1952. An experi-

Problems of the technology of metallic Chrome. S/764/61/000/000/002/003

mental production of chrome at the Zestafon Iron-Alloys Plant was performed by the staff of the Plant under the direction of G. Ya. Sioridze. The method is recommended for general industrial application. The high cost of the initial raw material is, to a degree, compensated by the high purity of the product obtained. Polychromatic solutions were developed at the Ural Polytechnical Institute imeni Kirov and at the Ural Scientific Research Institute for Metals. A systematic investigation of the electrolytic making of chrome from aqueous solutions of $CrCl_3$ was performed by the Laboratory of Pure Metals and Alloys of the TsNIICherMet. In addition to the methods already mentioned, an improved technology for the making of Chrome by the electrosilicothermic method was also performed. There are 10 figures and 2 tables; no references.

ASSOCIATION: TsNIICherMet (Central Scientific Research Institute for Ferrous Metallurgy).

Card 3/3

DEVYATYKH, G.G.; ZORIN, A.D.; ANEL'CHENKO, A.M.; LYAKHMANOV, S.B.; YEZHELEVA, A.Ye.

Chromatographic analysis of mixtures formed by some volatile inorganic hydrides. Dokl. AN SSSR 156 no. 5:1105-1108 Je '64. (MIRA 17:6)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N.I.Lobachevskogo. Predstavleno akademikom N.M.Zhavoronkovym.

NEKHOROSHEV, V.P.; KHOREVA, E.Ya.; KHISAMUTDINOV, M.G.; BOGDANOV, K.G.; SHILIN, D.M.; LYAKHNITSKAYA, I.V.; SOKOLOV, P.N.

Nikolai Nikolaevich Kurek,-1963; n obituary. Zap. Vses. min. ob-va 93 no. 2:246-247 '64. (MIRA 17:6)

LYAKHNITSKAYA, I.V.

Special features of the structure and ores of the Grekhovskoye deposit in the Altai. Inform. sbor. VSEGEI no.9:33-41 '59.
(MIRA 13:12)

(Altai Mountains--Ore deposits)
(Geology, Structural)

LYAKHNITSKAYA, I.V.

Characteristics of the ore manifestation in zones of intensive schistosity as revealed by Grekhovskoye complex metal deposits. Trudy VSEGEI 60:15-30 '61. (MIRA 15:3)
(Altai Mountains--Ore deposits)

LYAKHNITSKIY, V.M.

"Problems related to placer geology" by N.G. Bondarenko. Reviewed by V.M. Liakhnitskii. Sov. geol. 2 no.6:127-129 Je '59.
(MIRA 12:12)

1.Zabaykalzolotorazvedka.
(Gold ores)

LIAKHNITSKIY, VALERIAN EVGEN'EVICH

LIAKHNITSKII, VALERIAN EVGEN'EVICH. Sinii ugol'. Leningrad, AN SSSR, 1926. 105 p.
"Materialy po sinemu ugliu", p. 94-96.

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SO: LC, Soviet Geography, Part I, 1951, Uncl.

LIAKHNITSKIĬ, VAlerĭan Evgenĭevich

Mekhanizatsiia peregruzochnykh rabot na morskom transporte. [Mechanization os transshipping operations in the martime transportation]. Moskva, Transpechat' NKPS, 1929. 208 p. illus.

Bibliography; p. [206]

DLC:TC370.L5

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

LYAKHNITSKIY, VALERIAN YEVGEN'YEVICH, 1885.

PORTOVYYE GIDROTEKHNICHESKIYE SOORUZHENIYA. DOPUSHCHENO V KACHESTVE UCHEBNIKA DLYA STUDENTOV VUZOV VODNOGO TRANSPORTA MINISTERSTVA MORSKOGO I RECHNOGO FLOTA. LENINGRAD, IZD-VO MINISTERSTVA MORSKOGO I RECHNOGO FLOTA, 1933. v.

KIKODZE, B. and LIAKHNITSKII, V. Ye.

Kanaly SSSR: Kanal Moskva -Volga. [The canals of the U.S.S.R.: the Moscow-Volga Canal]. (Bol. sov. ents., 1937, v. 31, col. 231, illus. on col. 236).
DLC: AE55.B6

SO: Soviet Transportation and Communication, A Bibliography. Library of Congress, Reference Department, Washington, 1952, Unclassified.

LIAKHNITSKII, VALERIAN EVGEN'EVICH.

Maskirovka portov i vodnykh putei v usloviiakh PVO. [Camouflage of ports and waterways under conditions of antiaircraft defense]. Moskva, Izd-vo Narkomrechflota SSSR 1944. 90 p. diagrs. DLC UG449.L5

Morskie porty. 2. izd., perer. i dop. Leningrad, Gostransizdat,1932.(Title also in English:Sea Ports) MH

Morskie porty. [Sea Ports]. Utverzhdeno v kachestve uchebnika dl ia vysshikh morekhodykh uchilishch iOdesskogo instituta inzhenerov morskogo flota. Izd.4., perer. i dop. Moskva, Morskoi transport, 1948. 561p. maps, diagrs.
"Osnovnaia literatura":p.[537]-539 DLC TC205.L52 1948

Morskie porty i gidrotekhnicheskie sooruzheniia. [Sea ports and hydro technical installations]. Utverzhdeno v kachestve uchebnika dlia morekhodnykh uchilishch. Moskca, Morskoi transport, 1947. 506 p. diagrs.
"Ukazatel osnovnoi literatury":p.501-503. DLC TC205.L5

Vnutriportovyi transport. [Ports and transportation facilities]. Utverzhdeno v kachestve uchebnika dlia vtuzov vodnogo transporta. Izd.2. Moskva, Morskoi transport, 1945. 252 p. diagrs.
"Literatura": p. 250-[251] DLC: HE551.L5 1945

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

LIAKHNITSKII, Valerian Evgen'evich.

Proektirovanie rechnykh portov. [Drafting plans for river ports]. Dopushcheno v kachestve uchebnogo posobiia dlia vtuzov rechnogo transporta. Leningrad, Izd-vo Ministerstva rechnogo flota SSSR, 1947. 323 p. diagrs., tables. DLC: TC405.L5

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

IVANITSKIY, V. E.

Wrote about the "Linaymyy" ice breaker in "Morskiye Porty" (Sea ports), 1948, [illegible] 305.152, P. 35.

Soviet Source: N: Izvestiya, 14 May, 19[illegible]
Abstracted in USAF, "Treasure Island" on file in Library of Congress, Air Information Division, Report No. 91390

L[A]KHNITSKI[I], VALERIAN [E]VGEN[Y]EVICH

Osobennosti ustroistva gidroaeroportov. (In his: Morskie porty. Moskva, Izd-vo "Morskoi transport," 1948. p. 282-289)
Title tr.: Special features of hydro-airport installation.

TC205.L52

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

LYAKHNITSKIY, V.E.

FA 23/49T40

USSR/Engineering
Harbors

Oct 48

"Review of Professor V. E. Lyakhnitskiy's 'Maritime Ports,'" M. Plakida, Engr, Cand Tech Sci, 1 3/4 pp

"Morskoy Flot" No 10

Reviews favorably. Fourth ed, published by "Morskoy Transport," 1948, 562 pp, 21 rubles.

23/49T40

LIAKHNITSKIY, V. E.

Perevaika gruzov pri smeshannykh zheleznodorozhno-vodnykh perevozkakh. [Freight trans. shipment in combined railroad and water transportation]. (Rechnoi transport, 1950, no. 3, p. 9-11, diagrs).

DLC: TC601.R4

SO: Soviet Transportation and Communictions, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

1. LYAKHNITSKIY, V.Ye.

2. USSR (600)

4. Harbors

7. Port construction in carrying out the great projects of communism, Trudy LIIVT no. 18, 1951.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

LYAKHNITSKIY, Valerian Yevgen'evich, 1885- , doktor tekhnicheskikh nauk, professor.

[Fundamentals of seaport planning] Osnovy proektirovaniia morskikh portov. (MLRa 6:8)
Moskva, Morskoi transport, 1952. 446 p. (Harbors)

LYAKHNITSKIY, V. Ye.

Harbors

Ports of great construction projects. Nauka i zhizn' 19 No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, July, 1952. Unclassified.

LYAKHNITSKIY, V Ye

Portovyye gidrotekhnicheskiye sooruzheniya (Hydro-technical harbor equipment, by) V. Ye Lyakhnitskiy, N. A. Smorodinskiy, V. K. Shtentsel' (i dr.) Leningrad, Izd-vo Ministerstva Morskogo i rechnogo Flota SSSR, 1953 v. (v.-p) diagrs., tables. "Literatura": p. (621)
Lib. has: v. 1

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SEMAKOV, N.A., kandidat tekhnicheskikh nauk; LYAKHNITSKIY, V.Ye., doktor tekhnicheskikh nauk, redaktor.

[Lock waterways in the U.S.S.R.; transcript of a public lecture. Shliuzovannye vodnye puti SSSR. Leningrad, 1953. 42 p. (MLRA 7:8)

(Canals)

LYAKHNITSKIY, V.Ye., professor.

Port building at great communist construction projects. Mech.transp. 13 no.1: 9-11 Ja-F '53. (MLRA 6:11) (Harbors)

1. LYAKHNITSKIY, V.Ye.
2. USSR (600)
4. Harvesting
7. Harvesting lodged grain MTS 13 no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

LYAKHNITSKIY, V., professor.

Traffic capacity of a port and ways to increase it. Mor.i rech.flot 13 no.6: 8-11 O '53. (MLRA 6:10) (Harbors)

LYAKHNITSKIY, Valerian Yevgen'yevich, doktor tekhnicheskikh nauk;
REYNBERG, S.A., doktor ekonomicheskikh nauk, redaktor.

[Harbors, their installations and role in the national economy] Porty, ikh ustroistvo i rol' v narodnom khoziaistve. Leningrad, Vses.ob-vo po rasprostraneniiu polit. i nauchn. znanii, Leningradskoe otd-nie, 1955. 37 p. [Microfilm]
(Harbors) (MLRA 9:1)